

Open up your macro photography

Going on holiday to North Sulawesi is a mixed blessing. Sure, the diving is great, the biodiversity is staggering and the subjects are cooperative. But for the photographer these are challenging waters, because if we are honest, despite the diversity of life, we must admit that all of the photogenic subjects have been captured before.

One approach to get fresh images, that is popular with a number of photographers, is to take portraits actually showing some of the behaviour of these creatures. This is a good approach, but I told you about it in the last issue of UWP, so I need some new ideas for this article! One approach I favour when trying to come up with ideas is to follow the clear logic of Sherlock Holmes!

If I want to do something new I must eliminate what has been done before and whatever I am left with, however improbable, must be worth a go!

North Sulawesi is primarily a macro destination. And the basic rules

of macro are simple: “use a small aperture to get the maximum depth of field, use the fastest flash synchronisation shutter speed to remove ambient light, and illuminate the picture with TTL flash”.

If we plug this formula into our cameras and focus on the subject we will get good macro results. The problem is that this is what everyone has done before and we will hardly be stretching the envelope photographically. So following Sherlock’s logic I decided to ignore these three tenets of macro photography - to shoot macro with manual flash, with slower shutter speeds and to open up the aperture on my lens. The aim of this article is to tell you how I got on and pass on the tips I learned during the process!



Panning with a moving subject will create streaks of movement in the background. The outline of the gunard in this image has been slightly sharpened in Photoshop. Nikon D100 + 60mm lens.

Subal housing. 1/15th sec @ f16. 2 Subtronic Alphas on 1/4 and 1/2

Manual flash

If you shoot on film stick with TTL and skip to the next paragraph! For the digital photographers left reading, the ease of using manual flash exposures in macro photography is one of our best kept secrets!

Film photographers cannot imagine shooting without TTL, while most digital photographers would not

go back to the inflexibility of TTL exposure when they can shoot manual flash and get instant feedback from their LCD screen. I DO use TTL with my digital camera - I think it is excellent for free swimming fish photography when the subject to camera distance is constantly changing. But for macro where the camera to subject distance is pretty constant, we can shoot a test exposure and be sure all our subsequent shots are correctly exposed. With manual lighting we have

full creative control, particularly if we use two strobes. We now have the ideal tool to create the lighting we want, rather than the lighting that the Japanese guy who programmed the camera wanted.

Slow shutter speeds

The main consequence of slow shutter speeds in macro photography is that they allow us to burn in blue backgrounds, which dramatically changes the appearance of our images. For clean blue backgrounds it is best to shoot into open water. A slightly upwards camera angle is good because it can help reduce the exposure time. It is not always possible to isolate a subject against open water, yet we can still get blue backgrounds from reef or sand so long as we are deeper than about 8 metres and follow a few simple rules.

First, we must aim our strobes so they light only the subject - we won't get a blue background if we light it with flash. Second we should choose a shooting angle that puts the background as far back from the main subject as possible: this helps with the lighting but more importantly ensures we get good subject separation and the background is out of focus, less distracting and, of course, blue.

A particularly important



Long exposures allow us to add blue backgrounds to macro subjects. There is slight movement blur on the goby, but with exposures as long as this I find a small amount acceptable. Nikon D100 + 105mm lens. Subal housing. 1/8th sec @ f22. 2 Subtronic Alphas on 1/8th power.

consideration, if we are using sand or the reef as a background, is that it must be brighter than the main subject. If the main subject is brighter than the background it will be overexposed when lit with both ambient and flash light. Dark coloured subjects are ideal, white subjects will hardly ever work. If your subject is a similar brightness to the background choose a camera angle that casts it in shadow or silhouette.



Choosing a yellow, orange or red subject will provide a good colour contrast with a cyan or blue background.

Nikon D100 + 28-70mm lens. Subal housing. 1/180th sec @ f4.8. 2 Subtronic Alphas on 1/64th power.

Aesthetically, we should also consider the colours. If we are in tropical seas then our backgrounds will be cyans and blues, so we should select subjects with complimentary colours. I find red, orange and yellow subjects most attractive with cyan or blue backgrounds.

Judging the exposure for the image is most easily done with spot metering - spot meter on a nice mid-brightness area of the background and

set the exposure. If the camera doesn't have spot metering then you are best to take an average (matrix) exposure for the whole scene and then underexpose this by 1/3 to 2/3 of a stop. This underexposure accounts for the main subject which should be silhouetted or slightly darker than the background - remember the rules



Wide aperture macro also works on shots that are only lit with flash. Try to select backgrounds of strong, solid colour as details will be out of focus. Nikon D100 + 105mm lens. Subal housing. 1/180th sec @ f5.2 Subtronic Alphas on 1/32nd power.

above! TTL will do a good job with the main subject if it is large in the frame. If not it is best to bracket the TTL (if your camera lets you) to underexpose slightly by about 1/3 to 1 stop. With manual flash I find I often reduce the flash lighting by about 1 stop from a flash only exposure.

As I said above, we use slow shutter speeds in macro photography to get balanced light images (i.e. blue background and flash filled foreground) while maintaining the large depth of field achieved with a

small aperture. The obvious problem with slow shutter speeds is keeping the camera still - so that we do not create ghosting of the main subject from movement during the exposure.

The best advice I have here is to select subjects where you can rest the camera on the sand to take the shots. I found this technique particularly suitable on muck sites in Sulawesi. Choose subjects that do not have loads of wavy tentacles, polyps, fins etc, as these will undoubtedly move around during a long exposure. But



Select a shooting angle that accentuates the subjects separation from the background in the shallow depth of field, to give the image a three dimensional look.

Nikon D100 + 105mm lens. Subal housing. 1/180th sec @ f5.2 Subtronic Alphas on 1/32nd power.

there is no miracle cure, and I recommend taking several exposures to ensure you have a sharp one!

The alternative approach with a moving subject is to pan with the subject, allowing the background to streak and accentuate the movement.

Wide apertures

The alternative way to get blue backgrounds in our macro photography is to leave our shutter speeds alone and open up the lens's aperture. This removes the problems of blurry images from camera movement, but at the expense of depth of field. We still need to adhere to many of the rules of slow shutter



Balanced light makes cryptic subjects easier to see. The outline of this thorny seahorse can be seen easily against the blue background of un-flash-lit sand. Nikon D100 + 60mm lens. Subal housing. 1/45th sec @ f16. 2 Subtronic Alphas on 1/4 and 1/8th power.

speed macro photography (listed above) when it comes to judging exposure and in subject selection. However, the most important aspect to concentrate on in wide aperture macro is focus. With the lens opened right up, depth of field is minute and the smallest error in focusing immediately ruins a shot.

On the plus side, shallow depth of field gives images a more three dimensional look. The out of focus foreground and background also highlight the main subject making it pop out of the image. We can accentuate this effect in our subject selection by choosing a subject or shooting angle that creates a large distance between the foreground and background, which throws the background even further out of focus.

Wide aperture macro does not only have to be used for balanced light images, and can be effective in flash dominated images. Here we do not need to be so careful with subject versus background brightness, as everything is being lit by our flash guns.

The main tip I have is to seek out strong, solid colours for backgrounds. The shallow depth of field means that we will not see details in the background, but we will still see its colour.

Conclusion

For years underwater photography has been about bringing back images from a world few people ever see. But who are we kidding by saying we need to create another clean, crisp anemone fish identification shot.

Thanks to National Geographic, the Discovery Channel, the Blue Planet and Finding Nemo I think a very large proportion of the general public knows

what a anemone fish looks like! By the way, why didn't Nemo's father become his mother, when she died in the film? I always thought that anemone fish were protandrous hermaphrodites with sex determined by social control. Sorry, I digress!

The point I was trying to make is that I think underwater photographers often underestimate the sophistication of our audience. Many of our subjects are now familiar faces and our job as photographers has changed. No longer should we concentrate on just recording, we should be adding our personal interpretation of the subject in our images.

Studio portrait photographers have been doing this for years - you rarely see a whole human ID shot - the art of the photographer is revealed in how they light, focus and crop the subject. Opening up to different techniques in macro photography is just one way we can achieve this underwater.

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Photo by Steve Broadbelt